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Contract No. 7-35-058 eng 71

HEALTH DIVISION

REPORT FOR MONTH ENDING JUNE 30, 1948

J.

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11-5-56 M. Sherry

For: M. T. Bray, Supervisor
Laboratory Records Dept.
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HEALTH DIVISION

REPORT FOR MONTH ENDING JUNE 30, 1946

J. E. Wirth, M.D.

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M. Shirley

For: M. T. Bray, Supervisor

Laboratory Records Dept.

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June 30, 1946

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June 30, 1946

MemH-129

CLINTON LABORATORIES

MEDICAL SECTION OF HEALTH DIVISION

by

J. S. Felton, M.D. - - Section Chief

- 1) Dispensary. Dispensary service has been continued on a 24-hour basis. Pre-placement, termination and interval examinations have continued on a slightly accelerated basis.

The illnesses and injuries encountered during the month were of the type usually seen and the only cases of note were four cases of minor hand contamination. Hand counts were slightly above tolerance and all were brought promptly to sub-tolerance levels when the individuals briefly scrubbed their hands with soap and water.

A system of monthly inspection and study of food handling personnel was inaugurated whereby all cafeteria employees are inspected physically by a physician for the presence of communicable disease and rectal smears and cultures are made. This step has been taken in order to isolate any possible carriers of potential food poisoning organisms.

- 2) Physical Facilities. Within the past month additional diagnostic equipment has been secured consisting of a basal metabolism machine and complete apparatus for the conducting of all blood chemical determinations. In addition, biological culture media and an incubator have been secured in order to conduct such bacteriological studies as may be indicated. Certain therapeutic equipment has been received such as surgical instruments and a short wave diathermy. The addition of these items has helped considerably in providing more accurate diagnostic studies of patients and a more complete therapy for acute illnesses or injuries sustained by the laboratory personnel.

Alterations in certain sections of the dispensary have continued. The clinical laboratory is now completed, having been equipped with new cabinets, work areas and storage facilities in order to house the equipment recently secured. The combined pharmacy and medical supply room is nearing completion. The reception room has been altered and waiting benches and a central counter have been constructed and are now awaiting installation. Built-in benches have been installed in the main corridor to allow a better routing of patients from the reception room to either the treatment room or the physicians' offices. Reconstruction of the utility room, off the main treatment room, has been started in order to provide a linen preparation room with ample storage facilities. In this same room a cabinet has been built to house (1) the essentials required for decontamination of the skin of personnel contaminated with radioactive material, and (2) these chemicals believed to be of value in decreasing absorption or aiding elimination of ingested hazardous radioactive materials.

- SECRET
- 3) Library. Current medical journals have begun to come in and will serve as the basis of a new medical library for the section. These journals cover the fields, not only of general medicine, but also industrial health and industrial nursing.
 - 4) Personnel. Dr. J. L. Pinkston has replaced Dr. E. S. Farney, and Miss Rosemary Maiera has been secured as supervising nurse.
- SECRET

June 30, 1946

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CLINTON LABORATORIESMEDICAL SECTION - HEALTH DIVISIONJ. S. Felton, M.D. - Section ChiefDISTRIBUTION OF EFFORT FOR THE MONTH OF JUNE, 1946

<u>Personnel</u>	<u>Monthly</u>	<u>Weekly</u>
Physicians	4	0
Medical Technicians	1	5
Nurses	1	7
Office Personnel	0	5
	<u>6</u>	<u>17</u>
Number of technical personnel added:	2	
Number of technical personnel terminated:	1	
<u>Allocation of Time</u>		
<u>Physicians</u>		
Physical examinations	1½	0
Dispensary service	1	0
Special hazards problems)		
Haematology studies)	1/2	0
Research	0	0
Administration & FPR Writing	1	0
	<u>4</u>	<u>0</u>
<u>Medical Technicians</u>		
Supervision	1½	0
Blood studies	0	2
Animal pathology	0	1½
Urine analyses	0	1/4
Clerical	0	1/4
General laboratory	1/2	0
Vacation	0	1
	<u>1</u>	<u>5</u>
<u>Nurses</u>		
Supervision	1	0
Dispensary shift nursing	0	6
Visiting Nurse	0	1
	<u>1</u>	<u>7</u>
<u>Office Personnel</u>		
Clerical	0	5

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CLINTON LABORATORIES

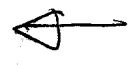
HEALTH-PHYSICS SECTION OF HEALTH DIVISION

by

K. Z. Morgan - - Section Chief

The mattress plates which catch the slugs as they are forced from the pile had become tattered and torn and were replaced on June 17 and 18. Before removing these mattress plates from the pile, they were washed down with a fire hose. Contaminated material and slugs were dislodged from the mattress with this water and by the use of knives and hooks attached to the ends of long poles. The maximum radiation reading at the surface of the old mattress plates before they were taken to the hot storage area was 7 roentgens per hour. This is the fourth time new mattress plates have been installed behind the pile, and profiting by previous experiences, the work was done with a minimum of radiation exposure. The lower part of the canal was drained and the slug chute removed so men could enter the chamber on the back face of the pile for inspection. The maximum field of radiation encountered during this inspection was 1200 mr/hr.

The twelfth barium production run was completed on June 18 and amounted to 2500 curies. The maximum reading on the loaded shipping container was 1600 mr/hr on top of the container. Cell B of the barium production building (706-D) which read 12 roentgens/hour at the inner doorway to the cell was decontaminated with live steam. This lead to a beta-gamma air contamination in the building of fifteen times tolerance and caused the evacuation of the building for several hours.

A spill occurred this month near tank W-9 in the tank farm, leading to a contamination of the ground to the extent of 100 roentgens/hour as measured two feet above the ground. A similar spill occurred last month. 

Operations in the semi-works of the Chemistry Building (706-A) have caused some air contamination and have resulted in a few thyroid counts of about half tolerance. Proper precautions have prevented any overexposures.

A few radiation exposures of construction men who are working in the restricted area have been recorded but no overexposures have resulted. Constant vigilance is necessary, however, to protect these men who are at liberty to wander most anywhere in the restricted area. For example, several of these men were found washing their hands and faces in the contaminated water just below the settling basin.

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A summary of the various film meters processed during the month of May is indicated below:

No. of film packets read	Personnel	Procedure
2,551	Visitors to C. L. Restricted Area.	Only meter worn. Read each day.
2,200	Construction workers in Restricted Area	Only meter worn. Read each day.
1,600	Regular C.L. employees in Restricted Area.	Read routinely bi-weekly.
50	Regular C. L. employees in Restricted Area.	Read because of occurrence of high double pocket meter readings.
275	A selected group of employees of Carbide & Carbon Co. (K-25) subject to radiation exposure	Read each week.
100	Clinton Laboratories' personnel doing work involving high hand exposure.	Read each day of exposure.
75	Clinton Laboratories' personnel subject to neutron exposure	Read bi-weekly.
6,851 - -	Total film packets processed during May.	

Comparative rough handling tests were made of the Chicago and of the Victoreen pocket meters. In the drop tests the Victoreen meters lost about twice the charge that was lost by the Chicago meters. With the rotation of meters in a steel drum the Victoreen meters lost about four times the charge that was lost by the Chicago meters.

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June 30, 1946

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CLINTON LABORATORIES

HEALTH PHYSICS SECTION - HEALTH DIVISION

K. Z. Morgan - - Section Chief

DISTRIBUTION OF EFFORT FOR THE MONTH OF JUNE, 1946

<u>Personnel</u>	<u>Monthly</u>	<u>Weekly</u>
Physicists (Asso. & Sr.)	5	0
Chemist, Elec Engr., H.P. Supv.,	3	0
Jr. Physicists & Research Asst's	25	0
Jr. Chemists	3	0
Laboratorians, Technicians & Clerical	0	32
	<u>36</u>	<u>32</u>
Number of technical personnel added during month	4	
Number of technical personnel terminated during month	1	
<u>Allocation of Time during June in Man-Months</u>		
<u>Services</u>		
Pocket Meters	0	9
Badge & Ring Meters	1	7
Neutron films	1	2
Hand, glove & shoe counts	0	1
Laundry counting	0	3
Calibration	0	1 1/2
Surveys - 100 area	2	0
Surveys - 200 area	2	0
Surveys - 706-A	2	2
Surveys - 706 B, C & D	8	0
Surveys - Construction area	2	0
Mud, water & air surveys	2	1
Trainees	3	0
<u>Research & Development</u>		
New instrument development	1	1
Instrument tests	2	1
Slow neutron studies	1	0
Fast neutron studies	1	0
Methods of detecting product in urine	0	0
Preparation of PFR	2	0
Apparatus for Crossroads Tests	2	0
<u>Administrative</u>	3	0
<u>Office Personnel</u>	0	2
<u>On vacation and leave of absence</u>	<u>1</u>	<u>1 1/2</u>
	<u>36</u>	<u>32</u>

June 30, 1946

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CLINTON LABORATORIES
BIOLOGICAL SECTION OF RESEARCH DIVISION

By

P. S. Henshaw - - Section Chief

Summaries have recently been completed pertaining to modification in the lives of mice which occur several months after single large doses of fast neutrons and gamma rays.

First of all it is plain that although animals appear to recover completely from an acute injurious effect of radiation, they nevertheless die prematurely, usually from neoplasia of the hemopoietic organs or early aging.

Secondly, the length of life in a general way varies inversely with the amount of radiation administered.

Thirdly, side experiments have revealed that for acute killing (death within 3 weeks), the higher the intensity of radiation use, the smaller the dose of radiation required to cause death. Fourthly, when the intensity is in the neighborhood of 7000 r per minute, animals are dead at the end of 20 minutes exposure.

June 30, 1946

MonH-129

CLINTON LABORATORIES

BIOLOGICAL SECTION OF RESEARCH DIVISION

By

P. S. Henshaw - Section Chief

DISTRIBUTION OF EFFORT FOR MONTH ENDING 6/30/46

Personnel

	<u>Monthly</u>	<u>Weekly</u>
Research Associates	1	0
Research Assistants	5	0
Technicians	0	2
Non-academic	0	8
Clerical	0	2
	<u>6</u>	<u>12</u>

Number of technical personnel added 1
 Number of technical personnel terminated 1

Allocation of Time - Academic

	<u>Rating</u>	<u>Time</u>	<u>Individuals</u>
BX12-11 - Periodic slow n	C	1/2	{ P. S. Henshaw E. F. Riley G. E. Stapleton M. B. Cupp J.J. Lane E. Anderson G. E. Stapleton E. Anderson All
BX12-12 - Single slow n	C	1/4	
BX12-13 - Periodic gamma	C	1/4	
BX12-14 - Single gamma	C	1/4	
BX12-17 - Periodic fast n	C	1/4	
BX12-20 - Vitality of mice	C	1/4	
Care of animals		1/4	
Reports		4	

Allocation of Time - Non-academic

	<u>Weekly</u>
Technicians - mouse wts., etc.	2
Clerical	2
Care of animals	8
	<u>12</u>